

SOME NOTES ON PHILOMYCUS.

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Philomycidae is a family of nearctic shellless land snails, or slugs. There has been a great deal of controversy with respect to the generic names, and also discussion on some of the species. The genus *Philomycus* was proposed by Rafinesque as "differing from *Limax* by no visible mantle." That was a mistake: the mantle covers the whole body except the front part of the head when the animal is extended, and a narrow seam along the sides of the sole. For that reason the genus was not recognized by Binney and other authors, and *Tebennophorus* Binney took its place. Yet, no one doubts now that *Philomycus* really means the same, and it is but just to revert to the earlier name. Rafinesque also established the genus *Eumelus* as distinct from *Philomycus* by the position of the tentacles, a feature which seems unintelligible. Later, E. S. Morse established the genus *Pallifera* on the ground that the jaw of *Ph. dorsalis* is strongly ribbed, odontognathous, while that of *Ph. caroliniensis* is smooth, and somewhat oxygnathous. But other species show intermediate forms.

These interesting slugs are still insufficiently known, as to both their systematic position and distribution, and it is very desirable that they be worked up from good material. Students of nature are respectfully and urgently invited to collect specimens wherever encountered, and to send them for examination, living if possible, with a little damp moss, or alcoholic, (in which condition, however, they are badly contracted). They are mostly found retired, under loose bark and in cavities of dead tree trunks and stumps, preferably in damp, shady places. At night, they sometimes ascend trees. They may be found also in winter time, during open weather; entomologists and collectors of cryptogams thus may have chances to take the slugs. It is hardly necessary to say that they are not venomous and cannot bite, as is believed by some people.

For the benefit of those who collect them, and naturally want some information about them, it may be in place to add a few notes with respect to the species and forms which have been seen from Ohio or can be expected to be found in the state.

As pointed out, *Philomycus* is distinguished from *Limax* by the mantle extending over almost the whole body, while in the latter genus it covers only about the anterior half. Besides, there are other morphological and anatomical differences.

1. *Ph. caroliniensis* Bosc. (*Limax caroliniensis* Bosc, *Tebennophorus caroliniensis*, in Binney, etc.), regarded as the type, attains a length of 100 millimeters when extended, but

usually is found smaller. The back (mantle) is whitish to pale tan, or grayish, "with clouds and spots of brownish and blackish so arranged as to form three ill defined longitudinal bands." On the variations of color, Binney has noted seven varieties, not named, and it has been suggested, recently, that at least some of them are probably distinct species. The question should be settled by examining the jaw, radula, genital organs, etc.

2. *Ph. dorsalis* Binney (*Pallifera dorsalis*, in Morse) is the smallest known now, the animal attaining a length of only about eighteen millimeters. Its color on the dorsal side is gray with a shade of blue, and a more or less interrupted dark median line. It is probably distributed all over Ohio, but has been overlooked or taken for the young of some other slug.

3. *Ph. sp.* I collected two specimens in the woods east of Chippewa Lake, the only ones known from Ohio. They were 30 millimeters long when extended, very slender, light tan colored over the back, with very slight darker mottlings, the sole anteriorly with a tinge of blood red. The jaw and radula were different from those of other species. Being possibly identical with *Ph. pennsylvanicus* Pilsbry, they were left unnamed for the present.

4. *Ph. sp.* Of the same size as *caroliniensis* or rather somewhat larger. The body is less opaque, and the surface gyrations are somewhat different. There is a series of irregular black spots along each side, and small irregular white spots are scattered over the whole mantle surface. Jaw and radula are different. Fifteen and twenty years ago, this was found rather frequently in the vicinity of New Philadelphia, in company with *caroliniensis*, and taken for one of the color varieties of the latter. Both are more scarce now. Specimens carefully examined last summer showed that they are of a distinct species, which will doubtless be found in other parts of the state. It has been named *Ph. biseriatus*, provisionally.

5. *Ph. wetherbyi* W. G. Binney has not been recorded from Ohio; but known from Kentucky (Laurel County), and also from northern Michigan, it should be found within our limits. It is rather small, with dark blotches in irregular transverse bands or longitudinal series. The jaw and radula are different from those of other species.

Other forms, and species may be found, and it is unnecessary to state that every specimen from any part of the state will be of interest.